



DEPARTMENT OF  
**ECOLOGY**  
State of Washington

## **Final Technical Support Document for Prevention of Significant Deterioration Permit**

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*Boeing Renton 737 Max Project  
Permit No. 12-01, Amendment 2*

August 16, 2018

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# **1. Executive Summary**

Boeing applied for an amendment of their Prevention of Significant Deterioration (PSD) permit for the Boeing Renton facility to allow physical or operational changes that are different from the original manufacturing process. This change will allow Boeing to achieve the production rate approved under Prevention of Significant Deterioration (PSD) Permit No. 12-01, Amendment 1 for the Boeing Renton facility (Boeing Renton). After reviewing, Ecology proposes to approve this request.

Boeing Renton is located on Logan Avenue in an industrial area of Renton, adjacent to Renton Municipal Airport. The facility is currently producing 737 Next Generation (NG) and 737 MAX-based airplanes. Operations at the facility include machining, parts assembly, primer, topcoat and specialty coating application, solvent cleaning, and facility and equipment maintenance and support activities.

The proposed changes will not result in an increase in volatile organic compound (VOC) emissions above those already permitted under PSD 12-01 Amendment 1. Boeing Renton did not propose any change to the existing permit conditions other than deleting outdate provisions and updating regulatory references.

This technical support document shows Ecology's analysis supporting our decision to approve this request.

## 2. Introduction

### 2.1. The permitting process

PSD permitting requirements in Washington State are established in Title 40, Code of Federal Regulations (CFR) §52.21; Washington Administrative Code (WAC) 173-400-700 through 750. Washington State implements its PSD program as a State Implementation Plan (SIP)-approved program. This SIP-approved program became effective May 29, 2015.

Federal and state rules require PSD review of all new or modified air pollution sources that meet certain criteria in an attainment or unclassifiable area with respect to the National Ambient Air Quality Standards (NAAQS). The objective of the PSD program is to prevent significant adverse environmental impact from emissions into the atmosphere by a proposed new major source, or major modification to an existing major source. The program limits degradation of air quality to that which is not considered “significant.” PSD rules require the utilization of Best Available Control Technology (BACT) for certain new or modified emission units, which is the most effective air pollution control equipment and procedures that are determined to be available after considering environmental, economic, and energy factors.

The PSD rules must be addressed when a new major source or major modification to an existing major source is proposed in an attainment or unclassifiable area and for which the new source or modification is major. PSD rules apply to pollutants for which the area is classified as attainment or unclassifiable with the NAAQS. PSD rules are designed to keep an area with “good” air in compliance with the NAAQS. The distinctive requirements of PSD are BACT, air quality analysis (allowable increments and comparison with the NAAQS), and analysis of impacts of the project on visibility, vegetation, and soils.

### 2.2. PSD permitting schedule

<u>Date</u>	<u>Description</u>
December 21, 2017	Received application to modify PSD No. 12-01, Amendment 1.
April 12, 2018	Application deemed complete.

### 2.3. PSD permitting history

Boeing Renton is currently operating under several PSD permits. These include the following:

- **PSD 12-01, Amendment 1** permit amendment based on selection of Option 2 of Phase 2 operation in PSD 12-01.
- **PSD 12-01** approved changes that enable the facility to produce “737 MAX” airplanes and increase the production capacity.
- **PSD 11-02** approved production capacity increases including four new replacement wing panel booths (Building 4-20) and one new and modified wing paint booth (Building 4-86). These changes accommodated a 737 production increase to 504 airplanes per year.

- **PSD 97-2** approved activities at Building 4-86. It includes 242 tons per year (tpy) VOC limit for Building 4-86.
- **PSD 88-4** approved activities at Building 4-41 paint hangar. It includes a 124 tpy VOC limit for Building 4-41.
- **PSD 08-01, Amendment 1** approved changes to Building 5-50 paint hangar and Buildings 4-20, 4-21, 4-81, and 4-82. It limits the VOC emissions from Buildings 4-20, 4-21, 4-81, and 4-82 to 118 tpy.

## 2.4. Site description

Boeing Renton is an existing major stationary source and has the potential to emit of VOC emission in excess of 250 tpy. The facility is located in an area that has been designated in attainment or unclassifiable with all national and state ambient air quality standards.

The Boeing Renton facility encompasses 4.3 million square feet (380,902 square meters) of building space and assembles single-aisle commercial airplanes. It is currently producing 737 NG and 737 MAX-based airplanes. The 737 NG is the name given to the -600/-700/-800/-900 series of the Boeing 737 aircraft. The 737 MAX series will eventually supplant the 737 NG.

Model 737 assembly operations primarily occur in Building 4-20, 4-21, 4-42, 4-81, 4-82, 4-86 and can be grouped as follows:

- **Wing Assembly Operations** include assembling the upper and lower wing panels. These operations primarily occur in Buildings 4-20 and 4-21.
- **Wing Clean, Seal, Test, and Paint Operations** include cleaning the complete wing assemblies, sealing them including the interior surfaces of the fuel tank, applying corrosion inhibiting compounds, testing the fuel tank for leaks, correcting any leaks, and painting the exterior surfaces. These activities only occur in Building 4-86.
- **Final Assembly Operations** include joining the wings and tail assemblies to the fuselage and adding necessary electrical systems, hydraulic systems, and interiors. These operations occur in Buildings 4-81 and 4-82.
- **Delivery Operations** include final painting, any necessary repainting, and preparing the airplane for delivery. These operations occur in Building 4-42 and paint hangars. Some airplanes receive their final exterior coating in Building 4-41 Paint Hangar and some in Building 5-50 Paint Hangar. Others are flown off-site because Renton does not have the capacity to apply the final exterior coating to all the airplanes produced in Renton.
- **Combustion Operations** include the boilers, heaters, and backup diesel generators. The boilers are located in Buildings 4-89 and 5-50.



## **2.5. Project description**

Under phase 2 of the project approved by PSD No.12-01, Amendment 1, the Boeing Renton facility is allowed to increase the capacity of 737 production. To increase production capacity, Boeing Renton can install up to three vertical wing booths (PB#5, PB#6 and PB #7), up to three corrosive inhibitor compound (CIC) booths (CB 1, CB 2 and CB 3) in Building 4-86 as well as modifying (fan replacement, etc.) three existing horizontal booths (PP5, PP6, and PP7) in Building 4-86.

For this application, Boeing Renton proposes to make physical and operational changes that are different from the original manufacturing process configuration described in PSD 12-01, Amendment 1, in order to achieve the production capacity approved under PSD No.12-1, Amendment 1. This permit amendment is to update the design configuration to ensure that the information provided remains accurate.

Boeing Renton has requested confidentiality for the details of the physical and operational changes detailed in its application dated 12-17-2017 on the basis that the information might allow the competitors to assess the equipment used in the production process, the method used to achieve production rates, and/or the costs and timelines associated with the production increases. After the review, Ecology finds that the specific details of the information will not affect the permit terms and conditions, nor does it provide information necessary to understand how the facility is being regulated and assure compliance. Therefore, Ecology will grant the confidentiality request.

## **2.6. Project's emission**

Boeing Renton did not propose any new paint booths or any changes to the range of the materials anticipated to be used in the regulated activities that could increase the VOC emission beyond those already evaluated in PSD No. 12-01 Amendment 1.

The proposed changes will not result in any VOC emission increase or any impacts of those emissions that were not already evaluated under PSD No. 12-01, Amendment 1.

### **3. Best Available Control Technology**

For this amendment, Boeing Renton did not propose any additional new or modified emission units for VOC and the proposed changes will not result in an increase in VOC emissions beyond what was reviewed and permitted under PSD 12-01 Amendment 1.

The proposed changes do not trigger BACT review.

## **4. Ambient Air Quality Analysis**

Because there will not be any increase in permitted VOC emissions, an air quality analysis is not required for this amendment.

## **5. State Environmental Policy Act**

This project triggers SEPA requirements for City of Renton. Therefore, City of Renton is the SEPA lead and will be responsible for issuing the SEPA determination. The issuance of this permit is pending on the City's SEPA determination.

## **6. Permit Conditions Update**

For phase 2 of the project, Boeing has been approved to:

- Add up to three new vertical wing booths (PB5, PB6, and PB7).
- Add up to three new CIC wing booths (CB1, CB2, and CB3).
- Modify up the three existing horizontal booths (PP1, PP2, PP3, PP4, PP5, PP6, or PP7).
- Add a new decorative paint hangar (P-7/P-8).

Boeing Renton has chosen to modify PP5, PP6, and PP7.

At the time of this review, Boeing Renton has completed construction on CB1 and CB2, and has no immediate plan to install CB3, PB5, PB6, PB7, or P-7/P-8. Boeing Renton maintains that the construction has not been discontinued for a period of eighteen (18) months or more, therefore the permit conditions continue to allow Boeing Renton flexibility to complete the construction if it chooses to install CB3, PB5, PB6, PB7, and/or P-7/P-8.

In addition, this permit amendment may only be appealed to the Pollution Control Hearings Board (PCHB) and not EPA's Environmental Appeals Board (EAB) because Washington PSD program was SIP-approved on May 29, 2015 [80 FR 23721, April 29, 2015]. The condition regarding appeal procedures in the permit has been revised to reflect the change.

## **7. Public Involvement**

This PSD permitting action is subject to a minimum 30-day public comment period under WAC 173-400-740. A newspaper public notice announcing the public comment period was published in Seattle Times on June 22, 2018. In accordance with WAC 173-400-740(2)(a), application materials and other related information are available for public inspection at:

Puget Sound Clean Air Agency (PSCAA)  
1904 Third Avenue, Suite 105  
Seattle, WA 98101

Washington Department of Ecology  
Air Quality Program  
300 Desmond Drive SE  
Lacey, WA 98503

The public comment period ran from July 12, 2018 and close on August 13, 2018.

Ecology did not receive any comment during the comment period.

## 8. Conclusion

Ecology concludes that this agency action will have no significant adverse impact on air quality or air quality- related values. The Washington Department of Ecology finds that the applicant, Boeing Renton, has satisfied all requirements for approval of the amendment to PSD 12-01, Amendment 2.

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